

### **REMARKS/ARGUMENTS**

Reconsideration and allowance of the present application based on the following remarks are respectfully requested.

Claims 19, 30 and 32 have been rejected under 35 U.S.C. § 103(a) as unpatentable over GB 1,122,466 ("GB '466") or KR 9505692 ("KR '692"). Claims 19 and 21-32 have also been rejected under 35 U.S.C. § 103(a) as unpatentable over EP 0415778 ("EP '778").

The Examiner contends that, "the reaction product of neopentyl glycol with carboxylic acids such as adipic, caprylic or pelargonic produces applicant's compound of a complex ester within the limitation  $n = 1.5-10$ ". Applicants respectfully disagree. Applicants respectfully point to the fact that the reaction product of neopentyl glycol with either caprylic acid (a monocarboxylic acid) or pelargonic acid (a monocarboxylic acid), in the manner suggested by the Examiner, would have no diacid moieties and, therefore, no "n" value associated with it. Likewise, the reaction product of neopentyl glycol with adipic acid (a dicarboxylic acid), in the manner suggested by the Examiner, would only have a single diacid moiety and, therefore, would not have  $n = 1.5 - 10$ .

Even if one were to consider the reaction product of neopentyl glycol with adipic acid, caprylic acid, *and* pelargonic acid, there is no suggestion in the cited prior art references for having  $n = 1.5 - 10$ , and certainly not for the unexpected properties associated with these esters. In fact, as illustrated in the following excerpt of Table 2 from page 6 of the pending application, the ester defined by the pending claims having  $n = 1.5 - 10$  exhibited unexpectedly superior properties:

<b>Ester</b>	<b>Biodegradability (%)</b>	<b>Thermal Stability (min)</b>	<b>Oxidative Stability (Change in Viscosity)</b>
Ester of Example 5 of the pending application ( $n \approx 2.1$ )	97.6	234.4	3.3
PRIOLUBE 1973 ("a neopentyl glycol diisostearate available ex. Uniqema") (having no associated "n" value) (p.6, line 19)	77.4	176.2	5.1

As is illustrated in this table, the ester having  $n = 1.5 - 10$ , as defined by the pending claims, exhibited superior biodegradability, thermal stability, and oxidative

stability, as compared to the neopentyl glycol diisostearate ester (which has no associated "n" value).

Additionally, contrary to Examiner's contention that "working fluids and lubricants are considered analogous because they fall under the general composition art of heat transfer fluids", Applicants respectfully point to the fact that metal working fluids have additional functional requirements which create particular structural (or compositional) requirements. In particular, for example, metal working fluids must be suitable not only for removing heat generated during a cutting or forming process, but must also provide corrosion protection to machines and workpieces being used in conjunction with the fluid; must provide an appropriate level of lubrication between a metal workpiece and a tool or die; and must remove metal fragments from the cutting or forming zone during use.

Refrigeration and aviation lubricants, likewise, have very particular functional requirements, which in turn creates particular structural needs. In particular, for example, refrigeration lubricants must provide for an oil seal at pistons, valves, gland seals, etc. for compressed gas between suction and discharge sides in a compressor; and must possess coolant properties for removing heat from crankcase to compressor exterior. Likewise, aviation lubricants must provide load bearing support and must provide stability against oxidation at relatively high temperatures.


As such, because the functional requirements for metal working fluids differ substantially from those associated with refrigeration and aviation lubricants, it would not have been obvious to one of ordinary skill in the art reading the cited references to use the esters disclosed in the cited references within metal working fluids, in the manner suggested by the Examiner.

Therefore, all objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

Should any issues remain unresolved, the Examiner is encouraged to contact the undersigned attorney for Applicants at the telephone number indicated below in order to expeditiously resolve any remaining issues.

Respectfully submitted,

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